COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
PIEDMONT REGIONAL OFFICE
4949A Cox Road, Glen Allen, Virginia 23060
(804) 527-5020 Fax (804) 527-5106
www.deq.virginia.gov

Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director

James J. Golden
Regional Director

October 18, 2018

Mr. S. Glenn McLean
General Manager
Kaiser Aluminum Fabricated Products LLC
1901 Reymet Road
Richmond, VA 23237

Location: Chesterfield County
Registration No.: 50249

Dear Mr. McLean:

Attached is a Title V permit modification to operate your facility pursuant to 9 VAC 5 Chapter 80 of the Virginia Regulations for the Control and Abatement of Air Pollution.

This permit contains legally enforceable conditions. Failure to comply may result in a Notice of Violation and civil penalty. Please read all conditions carefully.

This approval to operate does not relieve Kaiser Aluminum Fabricated Products LLC of the responsibility to comply with all other local, state, and federal permit regulations.

Issuance of this permit is a case decision. The Regulations, at 9VAC5-170-200, provide that you may request a formal hearing from this case decision by filing a petition with the Board within 30 days after this permit is mailed or delivered to you. Please consult that and other relevant provisions for additional requirements for such requests.

Additionally, as provided by Rule 2A:2 of the Supreme Court of Virginia, you have 30 days from the date you actually received this permit or the date on which it was mailed to you, whichever occurred first, within which to initiate an appeal to court by filing a Notice of Appeal with:

Mr. David K. Paylor, Director
Department of Environmental Quality
P. O. Box 1105
Richmond, VA 23218

In the event that you receive this permit by mail, three days are added to the period in which to file an appeal. Please refer to Part Two A of the Rules of the Supreme Court of Virginia for additional information including filing dates and the required content of the Notice of Appeal.

If you have any questions concerning this permit, please contact the regional office at (804) 527-5020.

Sincerely,

Kyle Ivar Winter, P.E.
Deputy Regional Director

JEK/JH/50249 9 18 TV mod.doc

Attachments: Permit

ec: Mike Halperin, Kaiser Aluminum Fabricated Products LLC
Director, OAPP
Manager, Data Analysis
Director, Office of Permits and Air Toxics (3AP10), U.S. EPA, Region III

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Federal Operating Permit
Article 1

This permit is based upon the requirements of Title V of the Federal Clean Air Act and Chapter 80, Article 1, of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution. Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13, §10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act, and 9 VAC 5-80-50 through 9 VAC 5-80-300, of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

Permittee Name:	Kaiser Aluminum Fabricated Products LLC
Facility Name:	Kaiser Aluminum Fabricated Products LLC – Bellwood, VA Plant
Facility Location:	1901 Reymet Road, Richmond, Virginia
Registration Number:	50249
Permit Number:	PRO50249

This permit includes the following program:
Federally Enforceable Requirements - Clean Air Act (Pages 5-24)

November 6, 2017
Effective Date

Kyle Ivar Winter, P.E., Deputy Regional Director

November 5, 2022
Expiration Date

October 18, 2018
Signature Date

October 18, 2018
Amendment Date

Table of Contents

Facility Information

Permittee
Kaiser Aluminum Fabricated Products LLC
1901 Reymet Road
Richmond, VA 23237

Responsible Official
Craig S. Robinson
General Manager

Facility
Kaiser Aluminum Fabricated Products LLC – Bellwood, VA Plant
1901 Reymet Road
Richmond, VA 23237

Contact Person
Robert Brandenburg
Environmental, Health & Safety Manger
(804) 743-6335

County-Plant Identification Number: 51-041-0003

Facility Description: NAICS 331318 – The facility is an aluminum extruded product manufacturing facility, which is operated by Kaiser Aluminum Fabricated Products LLC.

Purchased aluminum alloy logs and/or billets from others are sent directly to one of the three billet saws to be sawed into shorter billets as necessary. Sawed billets and purchased billets enter one of four aluminum billet heaters (furnaces). Next, the heated billets are extruded to form the desired product. Dies used in the extrusion process are periodically cleaned at the caustic cleaning station (unit no. U40). Particulate emissions, which occur during the cleaning of the dies are controlled by a wet scrubber (unit no. CD40).

After the extruded product is cooled with a water spray, solvent from the solvent degreaser and solvent production parts washer (unit no. U50) is used to clean any remaining lubricants from approximately 25% of the extruded products.

Emission Units

Equipment to be operated consists of:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
U40	S40	Caustic die cleaning station (one 1,683 gal. and one 570 gal. tanks used for tool steel extrusion dies cleaning)	17,000 lbs/hr	Heil Fume Scrubber Series 734	CD40	PM	10/26/95
U50	-	Solvent degreaser System (11,000 gal. dip tank with 7,000 gal. operating volume and solvent production parts washer for aluminum extrusions)	10,000 lbs/hr	-	-	-	-
I08	-	Gasoline Aboveground Storage Tank (supplies vacuum unit)	500 gallons	-	-	-	-
124	-	Tube Mill Driveshaft finish cleaning process	1,771 gal/yr	-	-	-	-

*The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement.

Caustic Cleaning Station (for Extrusion Dies) Requirements – (Emission Unit ID #U40)

1. **Process Equipment Requirements – (Emission Unit ID #U40) - Limitations -** Particulate emissions from the caustic cleaning station shall be controlled by a 99% efficient scrubber (Heil Fume Scrubber Series 734). The scrubber shall be provided with adequate access for inspection. The scrubber shall be equipped with a water flow meter. The flow meter shall be installed in an accessible location and shall be maintained by the permittee such that it is in proper working order at all times.
   (9 VAC 5-80-110 and Condition 3 of 10/26/95 Permit)

2. **Process Equipment Requirements – (Emission Unit ID #U40) - Limitations -** Emissions from the operation of the caustic cleaning station shall not exceed the limits specified below:

Total Suspended Particulate	0.5 lbs/hr	1.7 tons/yr
PM-10	0.5 lbs/hr	1.7 tons/yr

   (9 VAC 5-80-110 and Condition 7 of 10/26/95 Permit)

3. **Process Equipment Requirements – (Emission Unit ID #U40) - Limitations -** Visible emissions from the scrubber serving the caustic cleaning station shall not exceed 20% opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A) except for one six-minute period in any one hour of not more than 30% opacity.
   (9 VAC 5-80-110 and Condition 8 of the 10/26/95 NSR permit)

4. **Process Equipment Requirements – (Emission Unit ID #U40) – Monitoring/ Recordkeeping** – The permittee shall conduct the following monitoring:

   Once each operating day, the permittee shall obtain and record a reading from the water flow meter on the scrubber serving the caustic cleaning station. On any occasion that the scrubber or water flow meter is found to be inoperable or in a malfunctioning state, or the reading of the water flow meter indicates a water flow rate of less than 75 gallons per minute, the permittee shall conduct appropriate corrective action to return the scrubber and/or water flow meter to proper operation as expeditiously as possible.
   (9 VAC 5-80-110)

5. **Process Equipment Requirements – (Emission Unit ID #U40) –Monitoring/ Recordkeeping –** The permittee shall perform a visible emission observation (VEO) in accordance with 40 CFR 60, Appendix A, Method 22 on the exhaust stack of the caustic cleaning station scrubber at least one time per week that the caustic cleaning station is operated. If visible emissions are observed (does not include condensed water vapor/steam), the permittee shall take timely corrective actions such that the caustic cleaning station scrubber resumes operation with no visible emissions, or perform a visible emission

evaluation (VEE) in accordance with 40 CFR 60, Appendix A, Method 9 to assure visible emissions from the caustic cleaning station scrubber do not exceed 20 percent opacity. The VEE shall be conducted for a minimum of six minutes. If compliance is not demonstrated by this VEE, timely corrective action shall be taken such that the caustic cleaning station scrubber resumes operation with visible emissions of 20 percent or less. The permittee shall maintain an observation log to demonstrate compliance. The log shall include the date and time of the observations, whether or not there were visible emissions, any VEE recordings and any necessary actions.
(9 VAC 5-80-110)

6. **Process Equipment Requirements – (Emission Unit ID #U40) – Monitoring/ Recordkeeping -** The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Piedmont Regional Office. These records shall include, but are not limited to:

   a. The scrubber water flow rate records required by Condition 4 and details of any corrective action taken as a result of these records.

   b. Records of the emission factors used to calculate the emissions of each pollutant with an emission limitation in Condition 2.

   c. The results of the weekly visible emission inspections of the caustic cleaning station scrubber required by Condition 5 and details of any corrective action taken as a result of these inspections.

   These records shall be available on site for inspection by the DEQ and shall be current for the most recent five years.
   (9 VAC 5-50-50 and 9 VAC 5-80-110)

7. **Process Equipment Requirements – (Emission Unit ID #U40) - Monitoring – Compliance Assurance Monitoring (CAM) –** The permittee shall monitor, operate, calibrate and maintain the scrubber controlling the caustic cleaning station according to the CAM plan in this permit.
   (9VAC5-80-110 and 40 CFR 64.6 (c))

8. **Process Equipment Requirements – (Emission Unit ID #U40) - Monitoring – CAM –** The permittee shall conduct the monitoring and fulfill the other obligations specified in 40 CFR 64.7 through 40 CFR 64.9.
   (9VAC5-80-110 and 40 CFR 64.6 (c))

9. **Process Equipment Requirements – (Emission Unit ID #U40) - Monitoring – CAM –** At all times, the permittee shall maintain the monitoring equipment, including, but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.
   (9VAC5-80-110 and 40 CFR 64.7 (b))

10. **Process Equipment Requirements – (Emission Unit ID #U40) - Monitoring – CAM –** Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the caustic cleaning station is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of compliance assurance monitoring, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The permittee shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by inadequate maintenance or improper operation are not malfunctions.
(9VAC5-80-110 and 40 CFR 64.7 (c))

11. **Process Equipment Requirements – (Emission Unit ID #U40) - Monitoring – CAM –** Upon detecting an excursion or exceedance, the permittee shall restore operation of the caustic cleaning station (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup and shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator, designated condition, or below the applicable emission limitation or standard, as applicable.
(9VAC5-80-110 and 40 CFR 64.7 (d)(1))

12. **Process Equipment Requirements – (Emission Unit ID #U40) - Monitoring – CAM –** Determination that acceptable procedures were used in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.
(9VAC5-80-110 and 40 CFR 64.7(d)(2))

13. **Process Equipment Requirements – (Emission Unit ID #U40) - Monitoring –CAM –** If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the Piedmont Regional Office and, if necessary, submit a proposed modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated

conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.
(9VAC5-80-110 and 40 CFR 64.7(e))

14. **Process Equipment Requirements – (Emission Unit ID #U40) - Monitoring –CAM –** If the number of exceedances or excursions exceeds 5 percent duration of the operating time for the caustic cleaning station for a semiannual reporting period, the permittee shall develop, implement and maintain a Quality Improvement Plan (QIP) in accordance with 40 CFR 64.8. If a QIP is required, the permittee shall have it available for inspection. The QIP initially shall include procedures for evaluating the control performance problems and, based on the results of the evaluation procedures, the permittee shall modify the plan to include procedures for conducting one or more of the following, as appropriate:

    a. Improved preventative maintenance practices;

    b. Process operation changes;

    c. Appropriate improvements to control methods;

    d. Other steps appropriate to correct control performance; and

    e. More frequent or improved monitoring.

    (9VAC5-80-110 and 40 CFR 64.8(a) and (b))

15. **Process Equipment Requirements – (Emission Unit ID #U40) – CAM Recordkeeping –** The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan (QIP) required pursuant to §64.8 and any activities undertaken to implement a quality improvement plan (QIP), and other supporting information required to be maintained under this part (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).
    (9VAC5-80-110 and 40 CFR 64.9(b))

16. **Process Equipment Requirements – (Emission Unit ID #U40) - Testing -** The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.
    (9 VAC 5-80-110 and Condition 5 of the October 26, 1995 permit)

17. **Process Equipment Requirements – (Emission Unit ID #U40) - Reporting –** The permittee shall report the results of any scrubber water flow meter reading required by Condition 4, that demonstrates that the scrubber water flow rate was less than 75 gallons per minute. The permittee shall also report the length of time the scrubber was operated at such a

reduced water flow and the corrective actions taken to return the scrubber to normal operating conditions. This report shall be sent to the Director, Piedmont Regional Office. (9 VAC 5-50-50 and 9 VAC 5-80-110)

18. **Process Equipment Requirements – (Emission Unit ID #U40) – Reporting –** The permittee shall report the results of any EPA Method 9 (reference 40 CFR Part 60, Appendix A) opacity test performed as a result of Condition 5. If the test indicates the facility is out of compliance with the standard contained in Condition 3, the source shall also report the length of time associated with any exceedance of the standard and the corrective actions taken to correct the exceedance. This report shall be sent to the Director, Piedmont Regional Office. (9 VAC 5-50-50 and 9 VAC 5-80-110)

19. **Process Equipment Requirements – (Emission Unit ID #U40) – CAM Reporting –** The permittee shall submit CAM reports as part of the Title V semi-annual monitoring reports required by General Condition 46 of this permit to the Piedmont Regional Office. Such reports shall include at a minimum:

    a. Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

    b. Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

    c. A description of the actions taken to implement a quality improvement plan (QIP) during the reporting period as specified in §64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

    (9VAC5-80-110 F and 40 CFR 64.9(a))

Solvent Degreaser and Solvent Production Parts Washer (for Aluminum Extrusions) Requirements – (Emission Unit ID #U50)

20. **Process Equipment Requirements – (Emission Unit ID #U50) - Limitations –** No owner or other person shall use or permit the use of any cold cleaner unless such cleaner is equipped with a control method that will remove, destroy or prevent the discharge into the atmosphere of at least 85% by weight of volatile organic compound emissions. Achievement of this emission standard by use of the methods in Conditions 21, 22, and 23 will be acceptable to the board.
    (9 VAC 5-80-110 and 9 VAC 5-40-3280 C)

21. **Process Equipment Requirements – (Emission Unit ID #U50) - Limitations** – VOC emissions shall be controlled as follows:

    a. Covers or enclosed remote reservoirs shall be provided. Covers shall be designed so that they can be easily operated with one hand. (Covers for larger degreasers may require mechanical assistance, by spring loading, counterweighting or powered systems). Enclosed remote reservoirs shall be designed such that they provide reduction effectiveness equivalent to that of a cover.

    b. External or internal drainage facilities shall be provided to collect and return the solvent to a closed container or a solvent cleaning machine. The drainage facilities may be external for applications where an internal type cannot fit into the cleaning system.

    c. A permanent label summarizing the operating procedures in Condition 22 shall be placed in a conspicuous location on or near Emission Unit ID #U50.

    (9 VAC 5-80-110 and 9 VAC 5-40-3290 C1)

22. **Process Equipment Requirements – (Emission Unit ID #U50) - Limitations -** The permittee shall operate Emission Unit ID #U50 consistent with good operating practices including the following:

    a. Waste solvent shall not be disposed of or transferred to another party, such that greater than 20% of the waste (by weight) can evaporate into the atmosphere. Waste solvent shall only be stored in closed containers.

    b. The degreaser cover shall be closed whenever not handling parts in the cleaner.

    c. Cleaned parts shall be drained for at least 15 seconds or until dripping ceases.

    (9 VAC 5-80-110 and 9 VAC 5-40-3290 C2)

23. **Process Equipment Requirements – (Emission Unit ID #U50) - Limitations –** The permittee shall dispose the waste solvent from solvent metal cleaning operations by one of the following methods:

    a. Reclamation (either services or in-house)

    b. Incineration

    (9 VAC 5-80-110 and 9 VAC 5-40-3290 D)

24. **Process Equipment Requirements – (Emission Unit ID #U50) - Monitoring -** The permittee shall conduct an inspection of Emission Unit ID #U50 and review its operating practices to ensure that all applicable provisions of Conditions 21-23 are being met. On any occasion that an applicable provision is not being met, the permittee shall conduct

appropriate corrective action to return Emission Unit ID #U50 to proper operation as expeditiously as possible.
(9 VAC 5-80-110)

25. **Process Equipment Requirements – (Emission Unit ID #U50) - Recordkeeping –** The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Piedmont Regional Office. These records shall include, but are not limited to the results of the weekly inspections and reviews of Emission Unit ID #U50 and the operating practices required by Condition 24 and details of any corrective action taken as a result of these inspections. These records shall be available on site for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-110 and 9 VAC 5-40-50 F and H)

26. **Process Equipment Requirements – (Emission Unit ID #U50) - Reporting -** The permittee shall report the results of any inspection or review, required by Condition 24 that demonstrates that a requirement of Conditions 21-23 is not being met. The source shall also report the length of time associated with any exceedance of such a standard and the actions taken to correct the exceedance. This report shall be sent to the Director, Piedmont Regional Office.
(9 VAC 5-80-110 and 9 VAC 5-40-50 H)

Gasoline Storage Tank (supplies mobile vacuum unit) – Emission Unit ID #I08 Generally Available Control Technology (GACT) CCCCCC – National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities

27. **Process Equipment Requirements – (Emission Unit ID #I08) – General duties to minimize emissions –** Each owner or operator of an affected source under 40 CFR 63 Subpart CCCCCC must comply with the requirements of 40 CFR 63.11115 (a) and (b) as follows:

    a. You must at all times, operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Virginia Department of Environmental Quality - Piedmont Regional Office which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

b. You must keep applicable records and submit reports as specified in 40 CFR 63.11125(d) and 40 CFR 63.11126(b).

(9 VAC 5-80-110 and 40 CFR 63.11115)

28. **Process Equipment Requirements – (Emission Unit ID #I08) – Requirements for facilities with monthly throughput of less than 10,000 gallons of gasoline** –
    a. You must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:

        i) Minimize gasoline spills;

        ii) Clean up spills as expeditiously as practicable;

        iii) Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use.

        iv) Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

    b. You are not required to submit notifications or reports as specified in 40 CFR 63.11125, 40 CFR 63.11126, or subpart A of 40 CFR 63, but you must have records available within 24 hours of a request by VA Department of Environmental Quality (VADEQ) – Piedmont Regional Office (PRO) to document your gasoline throughput.

    c. You must comply with the requirements of 40 CFR 63 by the applicable dates specified in 40 CFR 63.11113.

    d. Portable gasoline containers that meet the requirements of 40 CFR 59 subpart F, are considered acceptable for compliance with 40 CFR 63.11116(a)(3).

    (9 VAC 5-80-110 and 40 CFR 63.11116)

Miscellaneous Emission Sources

29. **Miscellaneous Emission Sources – (Emission Unit ID #124) - Limitations** – At all times the disposal of volatile organic compounds shall be accomplished by taking measures, to the extent practicable, consistent with air pollution control practices for minimizing emissions. Volatile organic compounds shall not be intentionally spilled, discarded in sewers which are not connected to a treatment plant, or stored in open containers, or handled in any other manner that would result in evaporation beyond that consistent with air pollution practices for minimizing emissions.
    (9 VAC 5-80-110 and 9 VAC 5-40-20 F)

30. **Miscellaneous Emission Sources – (Emission Unit ID #124) - Recordkeeping –** The permittee shall maintain records of all emission data and operating parameters necessary to determine emissions and demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Piedmont Regional Office. These records shall be available on site for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-110 and 9 VAC 5-40-50 F and H)

Facility Wide Conditions

31. **Facility Wide Conditions – Monitoring and Recordkeeping –** In order to minimize the duration and frequency of excess emissions, including visible emissions, due to malfunctions of process equipment or air pollution control equipment, the permittee shall:

    a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance. These records shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.

    b. Maintain an inventory of spare parts that are needed to minimize durations of air pollution control equipment breakdowns.

    (9 VAC 5-80-110 and Condition 13 of 10/26/95 Permit)

32. **Facility Wide Conditions – Monitoring and Recordkeeping –** The permittee shall have available written operating procedures for the related air pollution control equipment. Operators shall be trained in the proper operation of all such equipment and shall be familiar with the written operating procedures. These procedures shall be based on the manufacturer's recommendations, at minimum. The permittee shall maintain records of training provided including names of trainees, date of training and nature of training.
(9 VAC 5-80-110 and Condition 14 of 10/26/95 Permit)

33. **Facility Wide Conditions - Testing -** The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.
(9 VAC 5-80-110 and Condition 5 of 10/26/95 Permit)

34. **Facility Wide Conditions - Testing -** If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the appropriate method(s) in accordance with procedures approved by the DEQ.
(9 VAC 5-80-110)

Insignificant Emission Units

35. **Insignificant Emission Units -** The following Emission Units at the facility are identified in the application as insignificant Emission Units under 9 VAC 5-80-720:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
U31	Granco Clark Model 812-40-6 aluminum billet natural gas heater No.2	9 VAC 5-80-720 C		7.2 MMBtu/hr
U34	Belco Industries serial 51133-14 aluminum billet natural gas heater No.3	9 VAC 5-80-720 C		4.5 MMBtu/hr
U35	Granco Clark Model 1416-55-7 aluminum billet natural gas heater	9 VAC 5-80-720 C		9.3 MMBtu/hr
I02	Oil/water separators	9 VAC 5-80-720 B	VOC	
I03	Oil/water separator dump station	9 VAC 5-80-720 B	VOC	
I04	(2) 20,000 gal (each) underground solvent storage tanks	9 VAC 5-80-720 B	VOC	
I05	(1) 560 gal. above ground diesel fuel storage tank (supplies diesel powered forklifts)	9 VAC 5-80-720 B	VOC	
107	(1) 1,100 gal. kerosene aboveground storage tank (supplies portable kerosene space heaters)	9 VAC 5-80-720 B	VOC	
I09	(2) 10,000 gal. (each) hydraulic fluid aboveground storage tanks and (2) 6,000 gal. spent fluid for recycle underground storage tanks	9 VAC 5-80-720 B	VOC	
111	(1) 9,000 gal. nitrogen generation unit/cryogenic storage tank	9 VAC 5-80-720 B	No regulated pollutants	
112	(1) 3,000 gal. oxygen generation unit/cryogenic storage tank	9 VAC 5-80-720 B	No regulated pollutants	
113	(3) video ink jet stations	9 VAC 5-80-720 B	VOC	
114	Billet, press finish and pack/ship aluminum saws	9 VAC 5-80-720 B	PM	
115	Wood shop saws	9 VAC 5-80-720 B	PM	

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
116	Billet, die and dummy block lubrication application at extrusion presses.	9 VAC 5-80-720 B	PM and VOC	
117	Natural gas installed space heaters (all are no longer in operation, except 3 over aluminum saw area)	9 VAC 5-80-720 C		0.50 MMBtu/hr (each)
118	Installed natural gas door heaters (all no longer in operation)	9 VAC 5-80-720 C		0.85 MMBtu/hr (each)
119	(5) Natural gas age/anneal ovens	9 VAC 5-80-720 C		3.5-6.0 MMBtu/hr (each)
120	Natural gas solvent still boiler unit	9 VAC 5-80-720 C		2.5 MMBtu/hr
121	Die cleaning sodium hydroxide tanks heating unit (open flame nozzles)	9 VAC 5-80-720 C		1.692 MMBtu/hr (total)
123	Granco Clark Model 1116-45-4 Hotjet aluminum billet natural gas heater No. 6	9 VAC 5-80-720 C		9.0 MMBtu/hr
125	Press extrusion quality marking process	9 VAC 5-80-720 B	VOC and HAP	

These Emission Units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping, or reporting shall be required for these Emission Units in accordance with 9 VAC 5-80-110.

Permit Shield & Inapplicable Requirements

36. **Permit Shield & Inapplicable Requirements -** Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit and the following requirements which have been specifically identified as being not applicable to this permitted facility:

Citation	Title of Citation	Description of Applicability
NA		No inapplicable requirements were identified in the Title V permit application.

Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by (i) the administrator pursuant to §114 of the federal Clean Air Act, (ii) the Board pursuant to §10.1-1314 or §10.1-1315 of the Virginia Air Pollution Control Law or (iii) the Department pursuant to §10.1-1307.3 of the Virginia Air Pollution Control Law.
(9 VAC 5-80-110 and 9 VAC 5-80-140)

General Conditions

37. **General Conditions - Federal Enforceability -** All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable.
(9 VAC 5-80-110)

38. **General Conditions - Permit Expiration -** This permit has a fixed term of five years. The expiration date shall be the date five years from the date of issuance. Unless the owner submits a timely and complete application for renewal to the Department consistent with the requirements of 9 VAC 5-80-80, the right of the facility to operate shall be terminated upon permit expiration.
(9 VAC 5-80-80, 9 VAC 5-80-110 and 9 VAC 5-80-170)

39. **General Conditions - Permit Expiration -** The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.
(9 VAC 5-80-80, 9 VAC 5-80-110 and 9 VAC 5-80-170)

40. **General Conditions - Permit Expiration -** If an applicant submits a timely and complete application for an initial permit or renewal under this section, the failure of the source to have a permit or the operation of the source without a permit shall not be a violation of Article 1, Part II of 9 VAC 5 Chapter 80, until the Board takes final action on the application under 9 VAC 5-80-150.
(9 VAC 5-80-80, 9 VAC 5-80-110 and 9 VAC 5-80-170)

41. **General Conditions - Permit Expiration -** No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9 VAC 5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9 VAC 5 Chapter 80.
(9 VAC 5-80-80, 9 VAC 5-80-110 and 9 VAC 5-80-170)

42. **General Conditions - Permit Expiration -** If an applicant submits a timely and complete application under section 9 VAC 5-80-80 for a permit renewal but the Board fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous

permit shall not expire until the renewal permit has been issued or denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9 VAC 5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.
(9 VAC 5-80-80, 9 VAC 5-80-110 and 9 VAC 5-80-170)

43. **General Conditions - Permit Expiration -** The protection under subsections F 1 and F 5 (ii) of section 9 VAC 5-80-80 F shall cease to apply if, subsequent to the completeness determination made pursuant section 9 VAC 5-80-80 D, the applicant fails to submit by the deadline specified in writing by the Board any additional information identified as being needed to process the application.
(9 VAC 5-80-80, 9 VAC 5-80-110 and 9 VAC 5-80-170)

44. **General Conditions - Recordkeeping and Reporting -** All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:

    a. The date, place as defined in the permit, and time of sampling or measurements.

    b. The date(s) analyses were performed.

    c. The company or entity that performed the analyses.

    d. The analytical techniques or methods used.

    e. The results of such analyses.

    f. The operating conditions existing at the time of sampling or measurement.

    (9 VAC 5-80-110)

45. **General Conditions - Recordkeeping and Reporting -** Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.
(9 VAC 5-80-110)

46. **General Conditions - Recordkeeping and Reporting -** The permittee shall submit the results of monitoring contained in any applicable requirement to DEQ no later than **March 1** and **September 1** of each calendar year. This report must be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

    a. The time period included in the report. The time periods to be addressed are January 1 to June 30 and July 1 to December 31.

b. All deviations from permit requirements. For purpose of this permit, deviations include, but are not limited to:

(1) Exceedance of emissions limitations or operational restrictions;

(2) Excursions from control device operating parameter requirements, as documented by continuous emission monitoring, periodic monitoring, or Compliance Assurance Monitoring (CAM) which indicates an exceedance of emission limitations or operational restrictions; or

(3) Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.

c. If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that "no deviations from permit requirements occurred during this semi-annual reporting period."

(9 VAC 5-80-110)

47. **General Conditions - Annual Compliance Certification -** Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and DEQ no later than March 1 each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices for the period ending December 31. The compliance certification shall comply with such additional requirements that may be specified pursuant to §114(a)(3) and §504(b) of the federal Clean Air Act. The permittee shall maintain a copy of the certification for five (5) years after submittal of the certification. This certification shall be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

a. The time period included in the certification. The time period to be addressed is January 1 to December 31.

b. The identification of each term or condition of the permit that is the basis of the certification.

c. The compliance status.

d. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance.

e. Consistent with subsection 9 VAC 5-80-110 E, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period.

f. Such other facts as the permit may require to determine the compliance status of the source.

g. One copy of the annual compliance certification shall be submitted to EPA in electronic format only. The certification document should be sent to the following electronic mailing address:

R3_APD_Permits@epa.gov

(9 VAC 5-80-110)

48. **General Conditions - Permit Deviation Reporting -** The permittee shall notify the Director, Piedmont Regional Office within four daytime business hours after discovery of any deviations from permit requirements which may cause excess emissions for more than one hour, including those attributable to upset conditions as may be defined in this permit. In addition, within 14 days of the discovery, the permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit deviation. The occurrence should also be reported in the next semi-annual compliance monitoring report pursuant to Condition 46 of this permit.
(9 VAC 5-80-110 F.2)

49. **General Conditions - Failure/Malfunction Reporting -** In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall, as soon as practicable but no later than four daytime business hours after the malfunction is discovered, notify the Director, Piedmont Regional Office by facsimile transmission, telephone or telegraph of such failure or malfunction and shall within 14 days of discovery provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the Director, Piedmont Regional Office.
(9 VAC 5-80-110 and 9 VAC 5-20-180)

50. **General Conditions - Severability -** The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.
(9 VAC 5-80-110)

51. **General Conditions - Duty to Comply -** The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is ground for enforcement action; for permit termination, revocation and reissuance, or modification; or, for denial of a permit renewal application.
(9 VAC 5-80-110)

52. **General Conditions - Need to Halt or Reduce Activity not a Defense -** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
(9 VAC 5-80-110)

53. **General Conditions - Permit Modification -** A physical change in, or change in the method of operation of, this stationary source may be subject to permitting under State Regulations 9 VAC 5-80-50, 9 VAC 5-80-1100, 9 VAC 5-80-1605, or 9 VAC 5-80-2000 and may require a permit modification and/or revisions except as may be authorized in any approved alternative operating scenarios.
(9 VAC 5-80-110, 9 VAC 5-80-190 and 9 VAC 5-80-260)

54. **General Conditions - Property Rights -** The permit does not convey any property rights of any sort, or any exclusive privilege.
(9 VAC 5-80-110)

55. **General Conditions - Duty to Submit Information -** The permittee shall furnish to the Board, within a reasonable time, any information that the Board may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Board copies of records required to be kept by the permit and, for information claimed to be confidential, the permittee shall furnish such records to the Board along with a claim of confidentiality.
(9 VAC 5-80-110)

56. **General Conditions - Duty to Submit Information -** Any document (including reports) required in a permit condition to be submitted to the Board shall contain a certification by a responsible official that meets the requirements of 9 VAC 5-80-80 G.
(9 VAC 5-80-110)

57. **General Conditions - Duty to Pay Permit Fees -** The owner of any source for which a permit under 9 VAC 5-80-50 through 9 VAC 5-80-300 was issued shall pay permit fees consistent with the requirements of 9 VAC 5-80-310 through 9 VAC 5-80-350. The actual emissions covered by the permit program fees for the preceding year shall be calculated by the owner and submitted to the Department by April 15 of each year. The calculations and final amount of emissions are subject to verification and final determination by the Department. The amount of the annual permit maintenance fee shall be the largest applicable base permit maintenance fee amount from Table 8-11A in 9VAC5-80-2340, adjusted annually by the change in the Consumer Price Index.
(9 VAC 5-80-110, 9 VAC 5-80-340, and 9 VAC 5-80-2340)

58. **General Conditions - Fugitive Dust Emission Standards -** During the operation of a stationary source or any other building, structure, facility, or installation, no owner or other person shall cause or permit any materials or property to be handled, transported, stored,

used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following:

a. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;

b. Application of asphalt, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;

c. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or similar operations;

d. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and,

e. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

(9 VAC 5-50-90 and 9 VAC 5-80-110)

59. **General Conditions - Startup, Shutdown, and Malfunction -** At all times, including periods of startup, shutdown, and soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
(9 VAC 5-50-20 E and 9 VAC 5-80-110)

60. **General Conditions - Alternative Operating Scenarios -** Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions under each such operating scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9 VAC 5 Chapter 80, Article 1.
(9 VAC 5-80-110)

61. **General Conditions - Inspection and Entry Requirements -** The permittee shall allow DEQ, upon presentation of credentials and other documents as may be required by law, to perform the following:

    a. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.

    b. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.

    c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit.

    d. Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

    (9 VAC 5-80-110)

62. **General Conditions - Reopening For Cause -** The permit shall be reopened by the Board if additional federal requirements become applicable to a major source with a remaining permit term of three years or more. Such reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9 VAC 5-80-80 F. The conditions for reopening a permit are as follows:

    a. The permit shall be reopened if the Board or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

    b. The permit shall be reopened if the administrator or the Board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

    c. The permit shall not be reopened by the Board if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9 VAC 5-80-110 D.

    (9 VAC 5-80-110)

63. **General Conditions - Permit Availability -** Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request.
    (9 VAC 5-80-150 and 9 VAC 5-80-110)

64. **General Conditions - Transfer of Permits -** No person shall transfer a permit from one location to another, unless authorized under 9 VAC 5-80-130, or from one piece of equipment to another.
(9 VAC 5-80-160 and 9 VAC 5-80-110)

65. **General Conditions - Transfer of Permits -** In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the Board of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9 VAC 5-80-200.
(9 VAC 5-80-160 and 9 VAC 5-80-110)

66. **General Conditions - Transfer of Permits -** In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the Board of the change in source name within 30 days of the name change and shall comply with the requirements of 9 VAC 5-80-200.
(9 VAC 5-80-160 and 9 VAC 5-80-110)

67. **General Conditions - Permit Revocation or Termination for Cause -** A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any applicable requirements, or the applicable provisions of 9 VAC 5 Chapter 80 Article 1. The Board may suspend, under such conditions and for such period of time as the Board may prescribe any permit for any grounds for revocation or termination or for any other violations of these regulations.
(9 VAC 5-80-110, 9 VAC 5-80-190 C and 9 VAC 5-80-260)

68. **General Conditions - Duty to Supplement or Correct Application -** Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit.
(9 VAC 5-80-110 and 9 VAC 5-80-80 E)

69. **General Conditions - Stratospheric Ozone Protection -** If the permittee handles or emits one or more Class I or II substances subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F.
(9 VAC 5-80-110 and 40 CFR Part 82)

70. **General Conditions - Asbestos Requirements** - The permittee shall comply with the requirements of National Emissions Standards for Hazardous Air Pollutants (40 CFR 61) Subpart M, National Emission Standards for Asbestos as it applies to the following:

Standards for Demolition and Renovation (40 CFR 61.145), Standards for Insulating Materials (40 CFR 61.148), and Standards for Waste Disposal (40 CFR 61.150). (9VAC5-60-70 and 9VAC5-80-110)

71. **General Conditions - Accidental Release Prevention** - If the permittee has more, or will have more than a threshold quantity of a regulated substance in a process, as determined by 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68. (9VAC5-80-110 and 40 CFR Part 68)

72. **General Conditions - Changes to Permits for Emissions Trading** - No permit revision shall be required under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.
(9VAC5-80-110)

73. **General Conditions - Emissions Trading -** Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to the extent that the regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:

    a. All terms and conditions required under 9 VAC 5-80-110, except subsection N, shall be included to determine compliance.

    b. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions that allow such increases and decreases in emissions.

    c. The owner shall meet all applicable requirements including the requirements of 9 VAC 5-80-50 through 9 VAC 5-80-300.

    (9 VAC 5-80-110)

Compliance Assurance Monitoring Plan:
Emissions Unit U40 Caustic Die Cleaning Station

I. Background

A. Emissions Unit

Description: Caustic die cleaning station used for tool steel extrusion die cleaning.
Identification: #U40
Facility: Kaiser Aluminum Fabricated Products
1901 Reymet Rd.
Richmond, Virginia 23237

B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Permit No.:	50249
Emission Limits:	PM (sodium hydroxide mist): 0.5 lb/hr; 1.7 tons/yr
Pre CAM Monitoring Requirements:	Scrubber water flow rate observations and visible emissions observations

C. Control Technology

Wet Packed Tower Scrubber, Heil Series 734, 99% efficiency rated.

II. Monitoring Approach

A. Indicator	Scrubber Water Flow Rate
B. Measurement approach	Scrubber water flow rate meter shall be visually observed once each day when U40 is operating. Readings and any work done as a result shall be documented.
C. Indicator Range	Scrubber water flow rate ≥ 75 GPM (gallons per minute)

III. Performance Criteria

A. Data Representativeness	The scrubber water flow rate gauge is located on the water inlet line inside the caustic room, adjacent to the Heil 734 series wet packed tower.
B. Verification of Operational Status	N/A
C. QA/QC Practices and Criteria	The scrubber water flow meter shall be installed in an accessible location and shall be maintained by the permittee such that it is in proper working order at all times. The flow meter will be calibrated at least once every two years in accordance with the manufacturer specifications. Annually the system (pump, motor, nozzle, packing and flow meter) will be inspected for visible obstructions and flow
D. Monitoring Frequency and Data Collection Procedure	The results of daily operational scrubber water flow rates and details of any corrective action taken as a result will be documented and recorded.

IV. Justification

Background

Aluminum tubes are produced by passing raw material through an extrusion press. During press operations, the steel mandrels and dies used become coated with aluminum. This tooling must be cleaned periodically to ensure quality. This cleaning takes place in the caustic room. The aluminum coated tooling is placed in a heated caustic solution and remains there for up to 1 week before being removed. Fugitive emissions from the caustic system is collected via a hood system connected to a central trunk duct. Air is drawn through the duct into a wet scrubber for particulate matter control. A water line continuously feeds fresh water to the wet scrubber which helps prevent the PM concentration from getting to high.

Rationale for Selection of Performance Indicator

Liquid flow rate: Gas flow rate is often a constant, based on process conditions and is the major design consideration of the scrubber; the liquid-to-gas (L/G) ratio is determined and maintained by the scrubber liquid flow rate. Scrubber liquid flow rate is a key indicator of performance, provided the liquid is being properly distributed or atomized and the liquid- gas interface is maintained. Under these conditions, higher liquid flow rates are indicative of higher levels of control.

Rationale for Selection of Indicator Range

Original '95 permit references a mass balance that was performed on the caustic cleaning station at Louisville plant #15. That data was used to factor the potential emissions controlled and uncontrolled) of the Bellwood caustic cleaning system. Manufacturer specifications support the use of the 75 GPM minimum and historical records (PMs and regulatory inspections) also support scrubber water flow rate as an appropriate indicator level to ensure permit compliance.